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WIC Dietary Assessment Validation Study

Executive Summary

United States Department of Agriculture
Food and Nutrition Service
USDA Contract #53-3198-2-032

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Acknowledgments

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Finally, very special appreciation is extended to the 969 WIC participants, women and their children, who volunteered to take part in this validation study. Their belief that their participation would assist the WIC program nation-wide made this study possible.

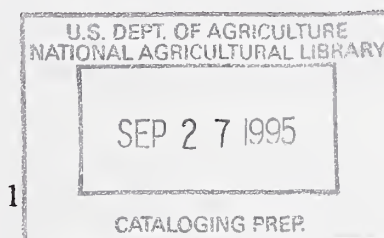
SECTION 1 - EXECUTIVE SUMMARY

The Food and Nutrition Service (FNS) of the U. S. Department of Agriculture initiated research in September 1992 to validate two sets of food frequency questionnaires (FFQs) in a study population made up of women and children eligible for the Special Supplemental Food Program for Women, Infants and Children (WIC). The purpose was to determine the comparative performance of these FFQs in ranking respondents with respect to the "true" dietary intake. In this study, true dietary intake was measured by three non-consecutive 24-hour diet recalls collected through a telephone interview. The two food frequency questionnaires tested were the:

- *Harvard FFQ* - Women's Food Frequency Questionnaire (WFFQ) and Children's Food Frequency Questionnaire (CFFQ) developed by Dr. Jane Gardner at Harvard University; and the
- *Block FFQ* - developed by Dr. Gladys Block at the University of California, Berkeley.

Food frequency questionnaires attempt to estimate dietary intake of an individual by asking how often specific foods are consumed. Based upon previous studies, the Harvard and Block FFQs each ask about a list of foods most commonly consumed by participants in the WIC program. These two FFQs differ on several dimensions, such as the number of food items (Harvard, 80 items; Block, 65 items), specific food items, the way food items are grouped, the frequency categories, and scoring methods. The Block FFQ also differs from the Harvard FFQ in that it asks an individual to approximate the usual portion size (small, medium or large) of each food item consumed.

Both the Harvard and Block FFQs have a woman's version and a child's version. The woman's version is designed for a woman to fill out about her own diet while the child's version is designed for a mother to fill out about the diet of her child (age 1-4).



Study Population

The population for this study consisted of four WIC categories and three ethnic/racial groups. The four WIC categories studied were:

- Pregnant women;
- Breastfeeding, postpartum women;
- Non-breastfeeding, postpartum women; and
- Children ages 1.0 through 4.9 years.

Within each of these four WIC categories, study participants were recruited to represent the following three “self-identified” ethnic/racial groups:

- African American;
- Hispanic; and
- White.

The study population was recruited from within the East, West, Southwest and Central regions of the United States. The specific field sites selected for recruitment were:

- Hempstead, New York;
- Berkeley and Oakland, California;
- Houston, Texas; and
- Cincinnati, Ohio.

Sample Design and Size

A stratified, rectangular sample design was used in this study. For each of the two FFQs (Harvard and Block), approximately 75 women in each of the three WIC categories (pregnant, breastfeeding and non-breastfeeding) and 75 children were sought. On the dimension of ethnicity, the target sample size was approximately 75 women in each of the three ethnic groups. Based on this design, a minimum of 600 participants, i.e., 300 for each of the two FFQs recruited across the four geographic regions, constituted this validation study's desired sample size. By the completion of the data collection period (July 1993 to January 1994) a combined total of 969 women and children had been

recruited, and of these, 650 had sufficiently adequate 24-hour recall data to be used in the final analyses.

Study Data

Participants recruited into the study were required to complete an initial administration of either the Harvard FFQ or the Block FFQ (FFQ-1), three non-consecutive 24-hour diet recalls, and a second administration of the FFQ (FFQ-2). The three diet recalls were collected by telephone interviews utilizing two-dimensional food models and were analyzed with the Minnesota Nutrition Data System (NDS 32). The recalls were used as the reference data for the validation study, providing an estimate of usual intake for the nutrients of interest to FNS and the WIC program. In analyzing the study data, the recall reference data were compared to the nutrient intake estimates resulting from the FFQ administrations. The study also compared manual and computerized scoring methods for both types of FFQs.

The following nutrients are targeted by the WIC Program and were examined in this study: protein, vitamin A, vitamin C, iron and calcium. Additionally, estimates of total energy were assessed because energy is important to pregnancy, lactation, growth and child development, and because the estimates are potentially useful for performing nutrient density calculations.

In addition to the validation and scoring investigations, an evaluation of FFQ usability was conducted. Data were collected systematically for both sets of FFQs, on each of the following:

Usability for the client

- Time required for FFQ completion by participants
- Amount of assistance required by participants
- Number and type of errors

Usability for WIC staff

- Time required to manually score FFQs
- Ease of manual scoring

Assessment of Usability by WIC Agencies

- Usefulness of FFQs to WIC staff for nutrition education and determining eligibility
- Opinions and recommendations from WIC staff.

Analytic Approach

A central purpose of FFQs, both for research and for WIC purposes, is to place individuals along a distribution of intake from low to high. Accuracy of the point estimates (group means), while useful for some purposes, provides no test whatsoever of the ability of an instrument to determine correctly whether an individual's intake is low or high. FFQ group means can be identical to diet recall group means and yet provide no ability to rank individuals; and conversely, FFQ group means can be significantly different from the diet recall means, but the FFQ may rank individuals quite well. Therefore, to be relevant for estimating whether an individual is at increased nutritional risk, a proposed FFQ must produce adequate correlations with reference data. It is correlation or categorization that forms the criterion for whether an instrument can provide a reasonably accurate estimation of an individual's location along the continuum from low to high intake.

Results

A Balanced Study Population

The recruited Harvard and Block study populations were well balanced, that is, not statistically different from each other in age, distribution among WIC categories, ethnicity, prior WIC experience, language (Spanish and English) and education. This remained true after cases with questionably high diet recall nutrient values were dropped from the analyses.

Rapid Completion of FFQs

Both types of FFQs were completed in less than 10 minutes by both African-

American and White study subjects, and in less than 15 minutes by Hispanic study subjects. For all women, the Block FFQ took longer to complete than the Harvard FFQ with a median time of 9.5 minutes for Block *versus* 8 minutes for Harvard.

The Block FFQ Is More Valid for White and African-American Women

The Block FFQ achieved higher correlations than the Harvard FFQ in three-fourths of the nutrient correlations examined (see Table 1, page 6). Among African-American and White women, 9 of the 12 Block FFQ correlations (six nutrients per ethnic group) were equal to or greater than 0.4, while only one of 12 Harvard FFQ correlations was that high (note: perfect correlation = 1.0). In addition to agreement as estimated by correlations, the Block FFQ performed better than the Harvard FFQ for African-American and White women in its ability to categorize them as *high*, *medium* or *low* with respect to their true dietary intake. The Block FFQ showed significant agreement between quartile rankings by FFQ and 24-Hour Recall nutrient estimates for all six nutrients of interest (energy, protein, vitamin A, vitamin C, iron and calcium). For the Harvard FFQ, statistically significant agreement was seen for protein and calcium only.

Use of Small-Medium-Large Portion Sizes Improves Validity of the Block FFQ

The Block FFQ permits respondents to describe their usual portion of each food item as small, medium or large. These reported portion sizes were used in the analyses of this validation study. The effect of eliminating these multiple portion sizes from the questionnaire for purposes of simplification was examined. When a medium portion size was substituted for all responses and the correlations recalculated, the results were poorer. The use of a standard medium portion size with the Block FFQ is therefore not recommended.

Neither FFQ Is Valid for Hispanic Women

Although the Harvard FFQ had generally higher correlations than Block for Hispanic women, validity correlations for both were quite poor and thus neither FFQ is recommended in a self-administered form for either nutrient estimates or to evaluate WIC

TABLE 1**Validity Coefficients for Harvard and Block**

		All Cases Included	
		Harvard	Block
African American	Energy	0.18	0.53
	Protein	0.22	0.46
	Vitamin A	0.00	0.28
	Vitamin C	-0.36	0.32
	Iron	0.02	0.40
	Calcium	0.27	0.46
Hispanic	Energy	0.19	0.14
	Protein	0.13	0.09
	Vitamin A	0.40	0.15
	Vitamin C	0.28	0.17
	Iron	0.28	-0.01
	Calcium	0.18	0.15
White	Energy	0.27	0.44
	Protein	0.33	0.53
	Vitamin A	0.28	0.62
	Vitamin C	0.33	0.20
	Iron	0.27	0.47
	Calcium	0.40	0.56
All Women	Energy	0.19	0.37
	Protein	0.24	0.35
	Vitamin A	0.21	0.32
	Vitamin C	0.13	0.30
	Iron	0.20	0.26
	Calcium	0.29	0.42
Pregnant	Energy	0.22	0.30
	Protein	0.29	0.32
	Vitamin A	0.29	0.26
	Vitamin C	0.12	0.18
	Iron	0.32	0.05
	Calcium	0.41	0.37
Breastfeeding	Energy	0.23	0.25
	Protein	0.18	0.22
	Vitamin A	0.23	0.26
	Vitamin C	0.05	0.22
	Iron	0.06	0.28
	Calcium	0.17	0.31
Non-Breastfeeding	Energy	0.14	0.48
	Protein	0.18	0.44
	Vitamin A	0.09	0.38
	Vitamin C	0.17	0.38
	Iron	0.20	0.37
	Calcium	0.23	0.43
Children	Energy	0.13	0.14
	Protein	0.19	0.15
	Vitamin A	0.28	0.03
	Vitamin C	0.10	0.19
	Iron	0.01	0.15
	Calcium	0.27	0.04

eligibility. For Hispanic women, both FFQs could possibly be used for nutrition education and counseling purposes but not for eligibility determination.

Neither FFQ Is Valid for Children

Among mothers and caretakers reporting for children, ages 1-4, it was found that neither FFQ can be recommended for use in a self-administered form to estimate nutrient intake or to evaluate WIC eligibility. It is possible, however, that a simple set of brief behavioral questions, such as "How often do you give your child fruit?" or "How often do you give your child vegetables?," may be more appropriate for this group. This approach could provide sufficiently useful information for education and counseling purposes and perhaps for eligibility as well. Obtaining precise nutrient estimates to evaluate WIC eligibility for children may not be possible by any method because of the measurement errors associated with proxy reporting.

Manual Scoring May Be Useful to Evaluate Eligibility

It was found that the manual scoring of both instruments is rapid and easy, once familiarity with the scoring system is attained. The amount of time to manually score the participants' first FFQ (FFQ-1) was virtually identical for both Harvard and Block FFQs, with a median time of 3.0 minutes and an average of just under 4 minutes for both. These identical averages both went down to 3.2 minutes for the second FFQ administration (FFQ-2).

In terms of validity, flexibility, and the ability to distinguish between groups with lower or higher nutrient intakes, the Block manual scoring system performed better than the Harvard manual scoring. Among African-American and White women classified as either "low" or "adequate" using the Block manual scores, the "low" group had a significantly lower mean nutrient intake (24-hour recall data) than the "adequate" group for all five nutrients of interest. Only one Harvard FFQ manual score (calcium) achieved statistical significance. Because groups with low nutrient intakes can better be identified by the Block manual score, this score may be useful for evaluating eligibility.

Below the RDA for One or More Nutrients is an Inappropriate Eligibility Criterion

On the basis of the diet recall data alone, 95% of the participants in this validation study were below 100% of the RDA on at least one of the five nutrients of interest (protein, vitamin

A, vitamin C, iron, calcium). An eligibility criterion of falling below 100% of the RDA on one or more of the five nutrients would then qualify virtually all income-eligible women and children.

Usefulness for Nutrition Education

Opinions were solicited from WIC clinic staff in three states unconnected with the research project. They voluntarily provided assessments of the FFQs' usability. They reported that both FFQs were generally useful in collecting dietary assessment information that was helpful in providing nutrition education to WIC clients. Some believed that the Harvard manual score related better to WIC eligibility criteria and to nutrition education models such as the "food pyramid," and they liked the manual score's easy, *pass-fail* system for rating each food group. WIC agency staff also felt that the Block portion quantity question regarding *how much each time* proved useful for discussing portion sizes with clients.

Few Errors by Most Participants

Relatively little assistance was required by respondents in completing the FFQs. Average assistance scores for both Harvard and Block FFQs were between *no assistance* and *little assistance*. Neither the Harvard nor the Block FFQ had a sufficiently large number of skipped food items to be considered a serious source of error.

Further Research

1) Although the FFQs cannot be recommended for Hispanic women, this limitation may be possible to correct with further work. Some examples would be: examination of FFQ validity when administered by interview; and investigating culturally-specific issues related to concepts of food, diet and frequency of food intake.

2) The Block estimates of vitamin C and calcium can be improved by modifying the frequency categories that were used to assess juices and milk in this study's version of the Block FFQ. Estimates of these nutrients in other validation studies with the Block FFQ were much better using different frequency categories for juices and milk.

3) Block manual score cutpoints can be identified that will more accurately reflect the proportion of the population with nutrient intake below the RDA. The cutpoints for manual

scoring used in this study were set before the intake distribution for this WIC population was known.

4) Because neither FFQ worked well for children, a brief set of questions can be identified and tested for assessing appropriate dietary intake among children.

Summary

In 1985 the General Accounting Office (GAO) called for a more valid and consistent method of assessing dietary risk in the WIC program and recommended that there be more standardization in the way that WIC eligibility is determined throughout the country. This study has provided a basis for meeting these recommendations. The validity and limitations of these two FFQs are now known. These results provide a foundation for achieving the desired validity and consistency in dietary assessment in the WIC program.

Among mothers and caretakers reporting for children, ages 1-4, neither the Harvard nor Block FFQ can be recommended for use in a self-administered form to estimate nutrient intake or to evaluate WIC eligibility. For women, however, improvements are still needed and are possible for both FFQs. Even in its present state, the Block FFQ produces correlations with reference data for White and African-American WIC-eligible women which are not substantially different from correlations previously demonstrated in better educated groups. Neither FFQ performs adequately for Hispanic women. Some of the reasons for this may pertain as much to the adequacy of the reference data as to the adequacy of the FFQs themselves. Thus, the potential usability of FFQs for Hispanic populations should not be discounted, but further investigation is clearly needed.



APPENDIX A

BLOCK FOOD FREQUENCY QUESTIONNAIRE

- **Cover Page for Block FFQ (Women's English Version)**
- **Block FFQ for Women (English Version)**
- **Block FFQ for Women (Spanish Version)**
- **Block FFQ for Children (English Version)**
- **Block FFQ for Children (Spanish Version)**

**The Block Food Frequency Questionnaires
can be purchased from:**

**Dr. Gladys Block
419 Warren Hall
University of California at Berkeley
Berkeley, California 94720
(510) 643-7896
Fax (510) 643-6981**

Foods You Ate in the Past 4 Weeks



Your Name: _____

This form will take about 15 minutes to complete.

OMB Disclosure Statement

Public reporting burden for this collection of information is estimated to vary from 10 - 25 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Agriculture Clearance Officer OIRM Room, 404-W, Washington, D.C. 20250; and to the Office of Management and Budget Paperwork Reduction Project (OMB NO. 0578-0018), Washington, D.C. 20503.

AWE 1

Scale 75% of original

Foods You Ate in the Past 4 Weeks

- This form asks about some of the foods you ate in the past 4 weeks. Remember to include meals and snacks eaten at home or out.
- For every food, please mark with an "X" how often you ate that food. *For example, if you drank orange juice twice a week in the past 4 weeks, put an "X" in the box under "2 per week" (see example below).*
- Please tell us how much of that food you usually eat each time. Put an "X" under "How Much Each Time?" for small, medium, or large. Is the amount small, medium or large compared to other women your age? Look at the example below for a large glass of orange juice.
- For some foods the "How Much" will be very specific. *For example, if you ate bread twice a day and usually had about one slice each time, you would put an "X" over the "1" for 1 slice (see example).*

Example:

Foods You Ate in the Past 4 Weeks	How Often in the Past 4 Weeks?								How Much Each Time?			
	Almost Never	PER MONTH		PER WEEK				PER DAY		AMOUNT		
		1 time last month	2-3 times last month	1 time per week	2 times per week	3-4 times per week	5-6 times per week	1 per day	2+ per day	Small	Medium	Large
Orange juice					X							X
Bread, including sandwiches, bagels and burger rolls									X			
										Slices (each time)		
										X	2	3+

Scale 75% of original

Foods You Ate in
the Past 4 Weeks

- 1 Bananas
- 2 Oranges
- 3 Peaches, cantaloupe
- 4 Apples, grapes or
any other fruit

How Often in the Past 4 Weeks?

Almost Never	PER MONTH		PER WEEK				PER DAY	
	1 time last month	2-3 last month	1 time per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day

How Much
Each Time?

AMOUNT		
Small	Medium	Large

- 5 Tomatoes
- 6 Broccoli
- 7 Greens, spinach
- 8 Cole slaw, cabbage
- 9 Carrots
- 10 Green salad
- 11 Salad dressing
- 12 Potatoes including
French fries
- 13 Sweet potatoes, yams
- 14 Cooked green peppers,
chile rellenos
- 15 Any other vegetable

Almost Never	PER MONTH		PER WEEK				PER DAY	
	1 time last month	2-3 last month	1 time per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day

0 0 0 1 1 2 2 3 4

Do Not Write
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Page 1

Vit C	Vit A	Prot	Iron	Calc

Scale 75% of original

How Much Each Time?

[illegible][illegible]

Page 2

Pls C	Pls A	Prod	req	calc

Foods You Ate in the Past 4 Weeks		How Often in the Past 4 Weeks?								How Much Each Time?		
		Almost Never	PER MONTH		PER WEEK				PER DAY		AMOUNT	
	1 time last month		2-3 last month	1 time per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day	Small	Medium	Large
31	Beans like pinto or refried beans											
32	Rice											
33	Chili with meat or beans (American style)											
34	Vegetable soup, tomato soup											
35	Any other soup											
36	Pizza									Slices		
										1	2	3+
37	Lunch meats, sliced ham									Slices		
										1	2	3+
38	Hot dogs									Hot Dogs		
										1	2	3+

	Almost Never	PER MONTH		PER WEEK				PER DAY		AMOUNT		
		1 time last month	2-3 last month	1 time per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day	Small	Medium	Large
39 Biscuits, muffins												
40 Corn bread, corn muffins												
41 Margarine or butter												
42 Cheese and cheese spread												
43 Mixed dishes with cheese, macaroni and cheese												
44 Salsa, taco sauce, ketchup, hot red peppers												
45 Bread, including sandwiches, bagels and burger rolls												
46 Corn tortillas												
47 Flour tortillas												

0
0
0
1
1
2
2
3
4

Slices (each time)		
1	2	3+
Tortillas (each time)		
1	2	3+
Tortillas (each time)		
1	2	3+

Page 3

**Do Not Write
Below**

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Slices		
1	2	3+

Slices		
1	2	3+

Hot Dogs	1	2	3+
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AMOUNT		
--------	--	--

Small	Medium	Large
-------	--------	-------

5	M	L

Fling (10000)		

Slices (each time)		
1	2	3+

1	2	3+
---	---	----

Tortillas (each time)		
1	2	3+

--	--	--	--	--

[illegible]

How Often in the Past 4 Weeks?

How Much Each Time?

48	Chips, popcorn, crackers, pork skins
49	Peanuts, peanut butter
50	Ice cream or pudding
51	Yogurt, frozen yogurt (including lowfat)
52	Donuts, pastry
53	Cake, cookies
54	Chocolate candy, candy bars

[illegible]

**Do Not Write
Below**

55	Orange juice
56	Apple juice, grape juice
57	Kool-Aid, fruit drinks, Hi-C
58	Lowfat and skim milk (not including milk on cereal)
59	Regular milk (not including milk on cereal)
60	Milk or cream in coffee or tea
61	Regular soft drinks (not diet soda)
62	Beer (all types)
63	All types of wine, wine coolers
64	Liquor (all types)
65	Sugar in coffee, tea or on cereal (not sugar substitutes)

[illegible]

Page 4

Scale 75% of original

During the past 4 weeks, how many pills did you usually take?

Multiple Vitamins

- 66 Prenatal vitamins
- 67 Multiple vitamins like One-a-Day tablets

None	PER WEEK		PER DAY				
	1-3 per week	4-6 per week	1 per day	2 per day	3 per day	4 per day	5+ per day

Single Vitamins

- 68 Iron pills
- 69 Calcium pills
- 70 Vitamin E pills
- 71 Vitamin C pills

None	PER WEEK		PER DAY				
	1-3 per week	4-6 per week	1 per day	2 per day	3 per day	4 per day	5+ per day

- 72 If you take Vitamin C, how many milligrams of Vitamin C is in each tablet?

100	250	500	1000	Don't know

Thank you for completing this form!

Do Not Write Below

Page 1

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Page 2

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Page 3

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Page 4

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TOTAL

--	--	--	--	--

Vit C Vit A Prot Iron Calc

Scale 75% of original

- Este cuestionario le pregunta sobre algunos de los alimentos que usted comió en las últimas 4 semanas. Acuérdesse de incluir comidas y meriendas/entre comidas dentro y afuera de su casa.
- Para cada alimento, por favor marque con una "X" debajo de la casilla que indica que tan seguido usted comió ese alimento. *Por ejemplo, si usted bebió jugo de naranja dos veces por semana en las últimas 4 semanas, marque con una "X" en la casilla bajo "2 por semana" (vea el ejemplo que sigue).*
- Por favor dejenos saber la cantidad de ese alimento que se come cada vez. ¿Es la cantidad pequeña, mediana o grande comparada con otras mujeres de su edad? Marque con una "X" bajo "¿Cuánto Cada Vez?", escogiendo entre Chico, Mediano y Grande. *Éfjese en el ejemplo que sigue para un vaso de jugo de naranja grande.*
- Para algunos alimentos, "¿Cuánto Cada Vez?" será muy específico. *Por ejemplo, si usted comió pan dos veces al día y usualmente se comió una rebanada cada vez, usted marca con una "X" sobre el "1" por una rebanada (vea el ejemplo que sigue).*

Comidas Que Comió en las Últimas 4 Semanas	¿Qué Tan Seguido en las Últimas 4 Semanas?						¿Cuánto Cada Vez?				
	POR MES		POR SEMANA				POR DÍA		CUÁNTO		
	1 vez en el mes pasado	2-3 en el mes pasado	1 vez por semana	2 por semana	3-4 por semana	5-6 por semana	1 por día	2+ por día	Chico	Mediano	Grande
Jugo de naranja/china				X							X
Pan incluyendo sandwiches, bagels y pan de hamburguesas								X		X	3+

[illegible]

¿Qué Tan Seguido en las Últimas 4 Semanas?

¿Cuánto Cada Vez?

[illegible]

	Casi Nunca	POR MES		POR SEMANA				POR DIA		CUANTO		
		1 vez en el mes pasado	2-3 en el mes pasado	1 vez por semana	2 por semana	3-4 por semana	5-6 por semana	1 por día	2+ por día	Chico	Mediano	Grande
21	Espaghetti con salsa de tomate											
22	Hamburguesas, hamburguesas con queso, burritos de res, tacos											
23	Bistec o rosbif/carne de res, costillas											
24	Caldo de res											
25	Higado incluyendo higado de pollo											
26	Cerdo incluyendo chuletas, asados, puerco/marrano											
27	Pollo frito											
28	Otro pollo (pollo en caldo, horneado o asado)											
29	Sandwich de atun o "tuna casserole"											
30	Pescado o sandwich de pescado											

**Por Favor No
Escriba Abajo**

Page 2

name	Barry	Yoda	Yoda	Yoda

¿Cuánto Cada Vez?

[illegible]

	Casi Nunca	POR MES 1 vez en el mes pasado 2-3 en el mes pasado	POR SEMANA 1 vez por semana 2 por semana 3-4 por semana 5-6 por semana	POR DIA 1 por dia 2+ por dia	CUANTO Chico Mediano Grande
39 Panecillos, bizcochos/bisquetes					
40 Pan de maiz, panecillos de maiz					
41 Margarina o mantequilla					
42 Queso y queso crema					
43 Platillos con queso incluyendo macarron con queso					
44 Salsa, ketchup, chiles rojos picantes					
45 Pan incluyendo sandwiches, bagels y pan de hamburguesa					Cada vez 1 2 3+
46 Tortillas de maiz/masa					Tortillas (cada vez) 1 2 3+
47 Tortillas de harina					Tortillas (cada vez) 1 2 3+

Page 3

2000

¿Cuánto Cada Vez?

**Por Favor No
Escriba Abajo**

[illegible][illegible]

Page 4

Ph C	Ph A	Prot	iron	Cake

¿Durante las últimas 4 semanas, cuántas píldoras se tomó usualmente?

Vitaminas Múltiples

- 66 Vitaminas prenatales
- 67 Vitaminas múltiples como Vitamina Una al Día

Ninguna	POR SEMANA		POR DIA				
	1-3 por semana	4-6 por semana	1 por día	2 por día	3 por día	4 por día	5+ por día

Vitaminas Individuales

- 68 Píldoras/tabletas de hierro
- 69 Píldoras/tabletas de calcio
- 70 Vitamina E
- 71 Vitamina C

Ninguna	POR SEMANA		POR DIA				
	1-3 por semana	4-6 por semana	1 por día	2 por día	3 por día	4 por día	5+ por día

- 72 ¿Si usted toma Vitamina C, cuántos miligramos de Vitamina C tiene cada píldora?
- | | | | | |
|-----|-----|-----|------|----------|
| 100 | 250 | 500 | 1000 | No
sé |
| | | | | |

¡Gracias por completar este cuestionario!

Page 1

Page 2

Page 3

Page 4

TOTAL

Vit C	Vit A	Prot	Iron	Calc

Por Favor No
Escriba Abajo

Foods Your Child Ate in the Past 4 Weeks

- This form asks about some of the foods your child ate in the past 4 weeks. Remember to include foods eaten at day care or with relatives or friends.
- For every food, please mark with an "X" how often your child ate that food. *For example, if your child drank orange juice twice a week in the past 4 weeks, put an "X" in the box under "2 times per week" (see example below).*
- Please tell us how much of that food your child usually eats each time. Is the amount small, medium or large compared to other children of the same age? Put an "X" under "How Much Each Time?" for small, medium, or large. *Look at the example below for a large glass of orange juice.*
- For some foods the "How Much" will be very specific. *For example, if your child ate bread twice a day and usually had about one slice each time, you would put an "X" over the "1" for 1 slice (see example).*

Example:

Foods Your Child Ate in the Past 4 Weeks	How Often in the Past 4 Weeks?								Compared to Other Children How Much Each Time?			
	Almost Never	PER MONTH		PER WEEK				PER DAY		AMOUNT		
		1 time last month	2-5 times last month	1 time per week	2 times per week	3-4 times per week	5-6 times per week	1 time per day	2+ times per day	Small	Medium	Large
Orange juice				X								X
Bread, including sandwiches, bagels and burger rolls								X		Slices (each time)		
									X	2	3+	

Scale 75% of original

**Do Not Write
Below**

How Often in the Past 4 Weeks?

[illegible]

1	Bananas
2	Oranges
3	Peaches, cantaloupe
4	Baby food fruit
5	Apples, grapes or any other fruit

[illegible]

6	Tomatoes
7	Broccoli
8	Greens, spinach
9	Cole slaw, cabbage
10	Carrots
11	Green salad
12	Salad dressing
13	Potatoes including French fries
14	Sweet potatoes, yams
15	Cooked green peppers, chile rellenos
16	Any other vegetable

Page 1

W.C.	W.A.	Prot	son	ake

Child's Name: _____

Compared to
Other Children
How Much
Each Time?

How Often in the Past 4 Weeks?

Foods Your Child Ate in the Past 4 Weeks

17	Cooked cereals, grits, hot baby food cereals
18	Cold cereals, such as Cheerios, with or without milk
19	Milk on cereal
20	Sugar on cereal
21	Eggs
22	Bacon, sausage, links

[illegible]

**Do Not Write
Below**

23	Spaghetti with tomato sauce
24	Hamburgers, cheeseburgers, beef burritos, tacos
25	Beef (steak or roast), ribs
26	Mixed dishes with beef like beef stew
27	Liver including chicken liver
28	Pork, pork chops, roasts
29	Fried chicken
30	Other chicken (stewed, baked or roasted)
31	Tuna sandwich or tuna casserole
32	Fish, fish sandwich

[illegible]

Wh C	Wh A	Prod	Isent	Date

Child's Name: _____

How Often in the Past 4 Weeks?

Compared to
Other Children
How Much
Each Time?Foods Your Child Ate
in the Past 4 Weeks

	Almost Never	PER MONTH		PER WEEK				PER DAY		AMOUNT		
		1 time last month	2-3 times last month	1 time per week	2 times per week	3-4 times per week	5-6 times per week	1 per day	2+ per day	Small	Medium	Large
50 Chips, popcorn, crackers, pork skins												
51 Peanuts, peanut butter												
52 Ice cream or pudding												
53 Yogurt, frozen yogurt (including lowfat)												
54 Donuts, pastry												
55 Cake, cookies												
56 Chocolate candy, candy bars												

0 0 0 1 1 2 2 3 4

	Almost Never	1-3 times last month	PER WEEK			PER DAY				AMOUNT		
			1 time per week	2-4 times per week	5-6 times per week	1 per day	2 times per day	3-4 times per day	5-6 times per day	Small	Medium	Large
57 Orange juice												
58 Apple juice, grape juice												
59 Kool-Aid, fruit drinks, Hi-C												
60 Lowfat and skim milk (not including milk on cereal)												
61 Regular milk (not including milk on cereal)												
62 Regular soft drinks (not diet soda)												

0 0 0 1 2 3 4 5 6

Do Not Write
Below

Page 4

Hi-C	Hi-A	Hi-B	Hi-C	Hi-D

Scale 75% of original

Child's Name: _____

During the past 4 weeks, how many pills did your child usually take?

Multiple Vitamins
Pills, chewable tablets or liquid

63 Multiple vitamins like One-a-Day tablets, children's vitamins

None	PER WEEK		PER DAY				
	1-3 per week	4-6 per week	1 per day	2 per day	3 per day	4 per day	5+ per day

Single Vitamins
Pills, chewable tablets or liquid

64 Iron pills

65 Calcium pills

66 Vitamin E pills

67 Vitamin C pills

None	PER WEEK		PER DAY				
	1-3 per week	4-6 per week	1 per day	2 per day	3 per day	4 per day	5+ per day

68 If your child takes Vitamin C, how many milligrams of Vitamin C is in each tablet?

100	250	500	1000	Don't know

Thank you for completing this form!

Page 1

Page 2

Page 3

Page 4

TOTAL

Vit C	Vit A	Folat	Iron	Calc

Do Not Write
Below

Scale 75% of original

Alimentos Que Su Niño/a Comió en las Últimas 4 Semanas

- Este cuestionario le pregunta sobre algunos de los alimentos que su niño/a se comió en las últimas 4 semanas. Acuérdesse de incluir los alimentos que se hayan comido en la guardería infantil o con familiares o amistades.
- Para cada alimento, por favor marque con una "X" debajo de la casilla que indica que tan seguido su niño/a comió ese alimento. *Por ejemplo, si su niño/a bebió jugo de naranja dos veces a la semana en las últimas 4 semanas, marque con una "X" en la casilla debajo de "2 por semana" (vea el ejemplo que sigue).*
- Por favor dejenos saber la cantidad de ese alimento que su niño/a se come cada vez. ¿Es la cantidad pequeña, mediana o grande comparada con otros niños de la misma edad? Marque con una "X" bajo "¿Cuánto Cada Vez?", escogiendo entre Chico, Mediano y Grande. *Fíjese en el ejemplo que sigue para un vaso de jugo de naranja grande.*
- Para algunos alimentos, "¿Cuánto Cada Vez?" será muy específico. *Por ejemplo, si su niño/a comió pan dos veces al día y usualmente se comió una rebanada cada vez, usted marca con una "X" sobre el "1" por una rebanada (vea el ejemplo que sigue).*

Ejemplo:

Comidas Que Su Niño/a Comió en las Últimas 4 Semanas

Jugo de naranja/china
Pan incluyendo sandwiches, bagels y pan de hamburguesa

¿Qué Tan Seguido en las Últimas 4 Semanas?

Cual de los	POR MES		POR SEMANA				POR DIA	
	1 vez en el mes pasado	2-5 en el mes pasado	1 vez por semana	2 por semana	3-4 por semana	5-6 por semana	1 por día	2+ por día
				X				
								X

Comparado a otros niños
¿Cuánto Cada Vez?

CUANTO		
Chico	Mediano	Grande
		X
X	2	3+

Scale 75% of original

**Por Favor No
Escriba Abajo**

¿Qué Tan Seguido en las Últimas 4 Semanas?

[illegible][illegible]

9 0 0 1 1 2 2 3 4

HLIC	HLIA	Prod	Prod	Tabo

¿Qué Tan Seguido en las Últimas 4 Semanas?

Comperado a
otros niños
¿Cuánto
Cada Vez?

17	Cereal cocido, comida de niños cereal caliente
18	Cereales fríos, como Cheerios, con o sin leche
19	Leche en cereal
20	Azúcar en cereal
21	Huevos/blanquillos
22	Tocineta/tocino, salchichas

[illegible]

**Por Favor No
Escriba Abajo**

23	Espagheti con salsa de tomate
24	Hamburguesas, hamburguesas con queso, burritos de res, tacos
25	Bistec o rosbif/carne de res, costillas
26	Caldo de res
27	Higado incluyendo higado de pollo
28	Cerdo incluyendo chuletas, asados, puerco/marrano
29	Pollo frito
30	Otro pollo (pollo en caldo, hornado o asado)
31	Sandwich de atún o "tuna casserole"
32	Pescado o sandwich de pescado

[illegible][illegible]

Page 2

WR C	WR A	Prod	front	tail

Comparado a
otros niños
¿Cuánto
Cada Vez?

[illegible]

A 10x10 grid with a shaded bottom-left quadrant (rows 6-10, columns 1-5). Black squares are located at (1,6), (1,7), (1,8), (1,9), (1,10), (2,6), (2,7), (2,8), (2,9), (2,10), (3,6), (3,7), (3,8), (3,9), (3,10), (4,6), (4,7), (4,8), (4,9), (4,10), (5,6), (5,7), (5,8), (5,9), (5,10), (6,6), (6,7), (6,8), (6,9), (6,10), (7,6), (7,7), (7,8), (7,9), (7,10), (8,6), (8,7), (8,8), (8,9), (8,10), (9,6), (9,7), (9,8), (9,9), (9,10), and (10,6), (10,7), (10,8), (10,9), (10,10).

WH C	WH A	Prod	Iron	Cale
------	------	------	------	------

**Por Favor No
Escriba Abajo**

¿Qué Tan Seguido en las Últimas 4 Semanas?

Casi Nunca	POR MES		POR SEMANA				POR DIA		CUANTO		
	1 vez en el mes pasado	2-3 en el mes pasado	1 vez por semana	2 por semana	3-4 por semana	5-6 por semana	1 por día	2+ por día	Chico	Mediano	Grande

0
0
0
1
1
2
2
3
4

Casi Nunca	1-3 en el mes pasado	POR SEMANA			POR DIA			
		1 vez por semana	2-4 por semana	5-6 por semana	1 por dia	2 por dia	3-4 por dia	5-6 por dia

CUANTO		
Chico	Mediano	Grande

0
0
0
1
2
3
4
5
6

57	Jugo de naranja/china
58	Jugo de manzana o de uva
59	Kool-Aid o bebidas de fruta, aguas frescas
60	Leche descremada/"lowfat" (sin incluir leche en cereal)
61	Leche entera/"whole" (sin incluir leche en cereal)
62	Sodas (sin incluir sodas de dieta)

Page 4

Ver C	Ver A	Prot	Prod	Date

Nombre del Niño/a: _____

¿Durante las últimas 4 semanas, cuantas píldoras usualmente tomó su niño/a?

Vitaminas Múltiples
Píldoras, tabletas, o en líquido63 Vitaminas múltiples como Vitamina
Una al Día, vitaminas para niños

Ninguna	POR SEMANA		POR DIA				
	1-3 por semana	4-6 por semana	1 por día	2 por día	3 por día	4 por día	5+ por día

Vitaminas Individuales
Píldoras, tabletas, o en líquido

64 Píldoras/tabletas de hierro

65 Píldoras/tabletas de calcio

66 Vitamina E

67 Vitamina C

Ninguna	POR SEMANA		POR DIA				
	1-3 por semana	4-6 por semana	1 por día	2 por día	3 por día	4 por día	5+ por día

68 ¿Si su niño/a toma Vitamina C, cuantos miligramos
de Vitamina C tiene cada píldora?

100	250	500	1000	No Se

¡Gracias por completar este cuestionario!

Page 1

Page 2

Page 3

Page 4

TOTAL

Vit C	Vit A	Folat	Iron	Calc

**Por Favor No
Escriba Abajo**

Scale 75% of original



APPENDIX B

HARVARD FOOD FREQUENCY QUESTIONNAIRE

- Harvard FFQ Administration Instructions
- Harvard FFQ Manual Scoring Templates
- Cover Page for Harvard FFQ (Women's English Version)
- Harvard FFQ for Women (English Version)
- Harvard FFQ for Women (Spanish Version)
- Harvard FFQ for Children (English Version)
- Harvard FFQ for Children (Spanish Version)

Important Note: The actual Harvard Women's and Children's questionnaires have the alternate items printed on a shaded background to facilitate reading across the frequency response categories. This is an important design feature which, unfortunately, could not be faithfully photo-copied on the examples printed in this Appendix. The questionnaires used in this validation study, obtained directly from Harvard School of Public Health, had the shaded items on them. An example of alternate shaded items can be seen on the Block FFQs in Appendix A.

**The Harvard Food Frequency
Questionnaires can be purchased from:**

**Dr. Jane Gardner
Department of Maternal and Child Health
Harvard School of Public Health
677 Huntington Avenue
Boston, Massachusetts 02115
(617) 432-1080
Fax (617) 432-3755
E-mail: JGardner@HSPH.HARVARD.EDU**

**Recommended Verbal Instruction for Administering the
Women's and Children's Food Frequency Questionnaires**

1. Fill in the client identification information in the upper right hand corner. Be sure to fill this in completely as the information is necessary to carry out the analyses.
2. Provide the appropriate questionnaire, clipboard, and pencil. Say to the woman,

"This is the form we would like you to fill out. It has three sides. We want you to think about what you ate (or your child ate) during the last four weeks. We know you can't remember exactly, but you probably have a good idea."

Read the direction on the form aloud while pointing to them.

"You select how often you ate the food from zero times in the last four weeks to six or more times each day," [point to the scale above the column].

"Suppose you (or your child) drank one glass of milk [point to milk] everyday [point to per day]. Then you put an X or a check here [point]. This column is for foods you had just one to three times in the last four weeks [point]."

"We are asking about serving of food, not tastes. So if you put an X here [point to ice cream, 6+/day], that would say that you had eaten six or more bowls of ice cream every day for the past four weeks. Use this column only for foods you ate a lot of every day. Remember to make a mark in this column [never] if you did not eat the food. It helps you to keep your place and it helps us to know that you did not forget a food."

3. Watch as the client fills out the first three foods to be sure she understands the instructions.
4. Collect the finished form and check for errors in completion, i.e., pages or rows not filled in, double marked rows, number of eggs.

Please Follow the Directions in the Order Given

1. Place this template on Page 1 so that the two shaded boxes show through the holes in the template.
2. Count the checks in each column, and write the numbers in the boxes beneath each column.
3. Using the colors above the boxes and the numbers in the boxes, compare with the following combinations for a match working from right to left. Once a match is found, mark the shaded box on the questionnaire with the symbol in the gray box (X or -) next to the matched combination.

In the combinations, any number that crosses two or more small boxes is the TOTAL of those small boxes.

4. Once you have marked the shaded box, go to the next food group.*

4						-
					≥1	X
			≥2		0	X
		≥2	1		0	X
	≥1	1	1		0	X
	2	0	1	1	0	X
		≥3	0		0	X
No match						-

						-
z10						X
					z1	X
			z2		0	X
		z4	1		0	X
	z1	3	1		0	X
	z3	2	1		0	X
	z5	1	1		0	X
	z7	0	1		0	X
		z7	0		0	X
	z2	6	0		0	X
	z4	5	0		0	X
	z6	4	0		0	X
	8	3	0		0	X
No match						-

- The shaded box with the mark [X] indicates the minimum intake has been met or exceeded.
The shaded box with the mark [-] indicates the minimum intake has not been met.

Copyright 1991, Harvard School of Public Health

Vegetables

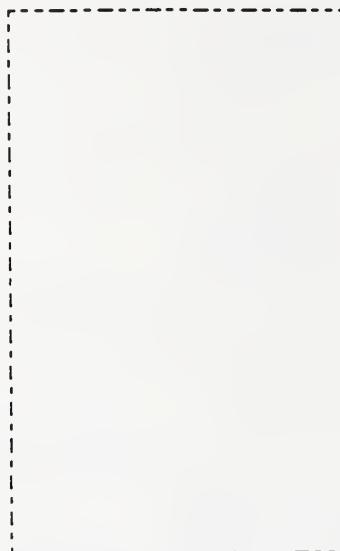
1. Place this template on Page 2 so that the shaded box shows through the hole in the template.
2. Count the checks in each column, and write the numbers in the boxes beneath each column.
3. Multiply the number in the box under B2 by 2. Add that result to the number in the box under B1, and write the sum in the circle.
4. Using the colors above the boxes, the numbers in the boxes, and the circle, compare with the following combinations for a match working from right to left. Once a match is found, mark the shaded box on the questionnaire with the symbol in the gray box (X or -) next to the matched combination.

In the combinations, any number that crosses two or more small boxes is the TOTAL of those small boxes.

5. Once you have marked the shaded box go to the next food group.*

Vegetables Combinations

25	()		0	0	-
	()			22	X
	()		21	1	X
	()		23	0	X
	()	22	2	0	X
	(22)	1	2	0	X
	(27)	0	2	0	X
	()	23	1	0	X
	(22)	2	1	0	X
	(29)	1	1	0	X
	(214)	0	1	0	X
	()	25	0	0	X
	(21)	4	0	0	X
	(26)	3	0	0	X
	(211)	2	0	0	X
	(216)	1	0	0	X
	(221)	0	0	0	X
No match					-



		B1	B2			
--	--	----	----	--	--	--

$$= B1 + (B2 \times 2)$$

- * The shaded box with the mark (X) indicates the minimum intake has been met or exceeded. The shaded box with the mark (-) indicates the minimum intake has not been met.

Copyright 1991, Harvard School of Public Health

Scale 75% of original

Meats

1. Place this template on Page 3 so that the shaded box shows through the hole in the template.
2. Count the checks in each column, and write the numbers in the boxes beneath each column.
3. Make an adjustment for eggs by adding 1 to the number of one box, as shown below:

Number of eggs/wk	Women	Children
1	None	[+1]
2 or 3	[+1]	[+1]
4	[+1]	[+1]
5 or more	[+1]	[+1]

4. Using the colors above the boxes and the numbers in the boxes, compare with the following combinations for a match working from right to left. Once a match is found, mark the shaded box on the questionnaire with the symbol in the gray box (X or -) next to the matched combination.

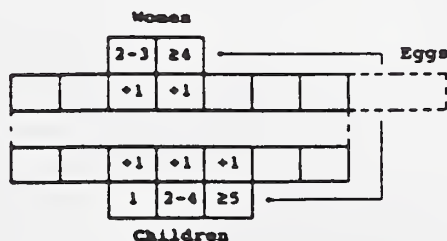
In the combinations, any number that crosses two or more small boxes is the TOTAL of those small boxes.

5. Once you have marked the shaded box, go to the next food group.*

Meats Combinations

≥6				0	0	-	
					≥1	X	
					≥2	0	X
			≥2	1	0	X	
		≥1	1	1	0	X	
	≥2	0	1	1	0	X	
			≥3	0	0	X	
	≥2	2	0	0	0	X	
	≥2	1	2	0	0	X	
	≥4	0	2	0	0	X	
		≥5	1	0	0	X	
	≥1	4	1	0	0	X	
	≥3	3	1	0	0	X	
	≥5	2	1	0	0	X	
	7	1	1	0	0	X	
		≥7	0	0	0	X	
	≥2	6	0	0	0	X	
	4	5	0	0	0	X	
No match							-

- * The shaded box with the mark [X] indicates the minimum intake has been met or exceeded. The shaded box with the mark [-] indicates the minimum intake has not been met.



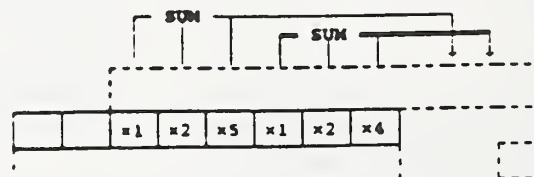
- In the combinations, any number that crosses two or more small boxes is the TOTAL of those small boxes.

25	0	-
	≥ 1	X

- ### Grains Combinations 2

	26	X
27	5	X
214	4	X
221	3	X
228	2	X
235	1	X
242	0	X
No match		-

- The shaded box with the mark {X} indicates the minimum intake has been met or exceeded. The shaded box with the mark {-} indicates the minimum intake has not been met.



Foods You Ate in the Past 4 Weeks



Your Name: _____

This form will take about 15 minutes to complete.

OMB Disclosure Statement

Public reporting burden for this collection of information is estimated to vary from 10 - 25 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Agriculture Clearance Officer OIRM, Room, 404-W, Washington, D.C. 20250; and to the Office of Management and Budget Paperwork Reduction Project (OMB NO. 0578-0018), Washington, D.C. 20503.

BWE 5

Scale 75% of original

Women's Nutrition Questionnaire

What Have You Been Eating Lately?

During the past 4 weeks, how often did you eat
a serving of each of the foods listed here?

Mark only one X for each food

Name _____

ID _____

Date _____

DOB _____

Pregnant []

EDC _____

Breastfeeding 1st 6 months []

Breastfeeding 2nd 6 months []

Not Breastfeeding []

Number of times	last 4 weeks		each week			each day				
	0	1-3	1	2-4	5-6	1	2-3	4-5	6+	
Milk										1
Hot chocolate										2
Cheese, plain or in sandwiches										3
Yogurt										4
Ice cream										5
Pudding										6

What kind of milk do you drink?

[] whole

[] lowfat

[] skim

Number of times	last 4 weeks		each week			each day				
	0	1-3	1	2-4	5-6	1	2-3	4-5	6+	
Orange or grapefruit										7
Orange juice or grapefruit juice										8
Apple juice										9
Other fruit drinks (Hi-C, Kool-aid, lemonade)										10
Banana										11
Apple or applesauce										12
Grapes										13
Peaches										14
Strawberries										15
Cantaloupe										16
Watermelon										17
Pineapple										18
Raisins or prunes										19

How often did you eat a serving of these foods during the past 4 weeks?

[illegible][illegible]

How often did you eat a serving of these foods during the past 4 weeks?

[illegible]



Cuestionario de Nutrición de Mujeres

¿Qué ha estado usted comiendo últimamente?

¿Durante las últimas 4 semanas, qué tan a menudo comió usted una porción de cada alimento en la lista que sigue?

Marque solamente una X por cada comida

Nombre _____

ID _____

Fecha _____

Fecha de Nacimiento _____

Embarazada []

EDC _____

Dió el Pecho []

Los primeros 6 meses

Dió el Pecho []

Los segundos 6 meses

No Dió el Pecho []

Numero de veces	últimas 4 semanas		cada semana			cada día				
	0	1-3	1	2-4	5-6	1	2-4	4-5	6+	
Leche										1
Chocolate caliente										2
Queso, sólo o en sandwich										3
Yogurt										4
Helado, nreve										5
Budín, pudín										6

¿Qué clase de leche bebe usted?

[] leche entera

[] leche parcialmente descremada (lowfat)

[] leche descremada o desnatad (nonfat)

Numero de veces	últimas 4 semanas		cada semana			cada día				
	0	1-3	1	2-4	5-6	1	2-4	4-5	6+	
China (naranja) o toronja										7
Jugo de china (naranja) o jugo de toronja										8
Jugo de manzana										9
Otros jugos de frutas (Hi-C, Kool-aid, lemonada)										10
Guineo, plátano o banano										11
Manzana o pure de manzana										12
Uvas										13
Melocoton, durazno										14
Fresas										15
Melón										16
Sandia, melón de agua										17
Piña										18
Pasas o ciruelas										19

¿Qué tan a menudo comió usted una porción de ellos alimentos en las últimas 4 semanas?

[illegible][illegible]

¿Qué tan a menudo comió usted una porción de ellos alimentos en las últimas 4 semanas?

[illegible]

A collection of geometric shapes arranged in a pattern. At the top left is a horizontal rectangle with a dashed line above it. To its right is a circle. Below the rectangle is another horizontal rectangle. To the right of this rectangle is a circle. Below the second rectangle is a row of six circles. To the right of the circles is a horizontal rectangle. Below the circles is a row of seven squares. To the right of the squares is a horizontal rectangle. Below the squares is a row of seven squares. To the right of the squares is a horizontal rectangle.



Children's Nutrition Questionnaire

What Has Your Child Been Eating Lately?

During the past 4 weeks, how often did your child eat a serving of each of the foods listed here?

Mark only one X for each food

Name _____

ID _____

Date _____

DOB _____

Age _____

Respondent

Mother []

Other [] _____

Number of times	last 4 weeks		each week			each day				
	0	1-3	1	2-4	5-6	1	2-3	4-5	6+	
Milk										1
Hot chocolate										2
Cheese, plain or in sandwiches										3
Yogurt										4
Ice cream										5
Pudding										6

What kind of milk does your child drink?

[] whole

[] lowfat

[] skim

Number of times	last 4 weeks		each week			each day				
	0	1-3	1	2-4	5-6	1	2-3	4-5	6+	
Orange										7
Orange juice										8
Apple juice										9
Other fruit drinks (Hi-C, Kool-aid, lemonade)										10
Banana										11
Apple or applesauce										12
Grapes										13
Peaches										14
Strawberries										15
Cantaloupe										16
Watermelon										17
Pineapple										18
Raisins										19

Mark only one X for each food

How often did your child eat a serving of these foods during the past 4 weeks?

Number of times	last 4 weeks		each week			each day				
	0	1-3	1	2-4	5-6	1	2-3	4-5	6+	
Corn										20
Peas (canned, frozen, or fresh)										21
Tomatoes										22
Peppers (green, red, hot)										23
Carrots										24
Broccoli										25
Green beans										26
Spinach										27
Greens (mustard, turnip, collards)										28
Squash, orange or winter										29
French fries, fried potatoes										30
Potatoes (baked, boiled, or mashed)										31
Sweet potatoes or yams										32
Cabbage or coleslaw										33
Lettuce salad										34
Salad dressing or mayonnaise										35

--	--	--	--	--	--	--	--	--

☐


Number of times	last 4 weeks		each week			each day				
	0	1-3	1	2-4	5-6	1	2-3	4-5	6+	
Chips (potato, corn, others)										36
Nuts										37
Cookies or brownies										38
Cake or cupcake										39
Pie (pumpkin, sweet potato, or squash)										40
Other pie										41
Jello										42
Chocolate candy										43
Other candy										44
Tea										45
Soft drinks										46
Sugar-free soft drinks										47

How often did your child eat a serving of these foods during the past 4 weeks?

[illegible]

How many eggs does your child eat in one week?



Cuestionario de Nutrición de Niños

¿Qué ha estado comiendo su niño últimamente?

¿Durante las últimas 4 semanas, qué tan a menudo comió su niño una porción de cada alimento en la lista que sigue?

Marque solamente una X por cada comida

Nombre _____

ID _____

Fecha _____

Fecha de Nacimiento _____

EDAD _____

Respondedor _____

Madre [] _____

Otro [] _____

Número de veces	últimas 4 semanas		cada semana			cada día				
	0	1-3	1	2-4	5-6	1	2-4	4-5	6+	
Leche										1
Chocolate caliente										2
Queso, sólo o en sandwich										3
Yogurt										4
Helado, nreve										5
Budín, pudín										6

¿Qué clase de leche bebe su niño?

[] leche entera

[] leche parcialmente descremada (lowfat)

[] leche descremada o desnatada (nonfat)

Número de veces	últimas 4 semanas		cada semana			cada día				
	0	1-3	1	2-4	5-6	1	2-4	4-5	6+	
China (naranja)										7
Jugo de china (naranja)										8
Jugo de manzana										9
Otros jugos de frutas (Hi-C, Kool-aid, lemonada)										10
Guineo, plátano o banano										11
Manzana o pure de manzana										12
Uvas										13
Melocoton, durazno										14
Fresas										15
Melón										16
Sandía, melón de agua										17
Piña										18
Pasas										19

¿Qué tan a menudo comió su niño una porción de ellos alimentos en las últimas 4 semanas?

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Marque solamente una X por cada comida
 ¿Qué tan a menudo comió su niño una porción de ellos alimentos en las últimas 4 semanas?

Número de veces	últimas 4 semanas		cada semana			cada día				
	0	1-3	1	2-4	5-6	1	2-4	4-5	6+	
Habichuelas asadas con chile, frijoles guisados										48
Otras habichuelas, frijoles secos, gusante, chicharo o haba										49
Arroz										50
Espagueti u otra pasta con salsa										51
Pizza										52
Macarrones con queso										53
Hot dog										54
Hamburguesa, albondiga o carne mechada, deshebrada										55
Atún de lata										56
Fiambres (bologna, jamón, salami), carnes frías										57
Mantequilla de maní, cacahuete										58
Pan, tostado o bolillos										59
Margarina o mantequilla										60
Pollo o pavo										61
Chuletas, carne de res o costillas										62
Bistec o rosbif										63
Pescado										64
Hígado										65
Salchichas										66
Tocino										67
Cereal caliente, avena o atole										68
Cereal frío para el desayuno										69
Donas										70
Pan dulce										71
Panque, hot cakes o French toast										72
English muffin o bagel										73
Bizcocho, bisquetes										74
Pan de maíz o tortilla										75
Sopa de verdura, caldo de verdura										76
Otras sopas, caldos										77
Galletas saladas										78

¿Cuántos huevos come su niño en una semana?

_____ ○ ☐

○ ○ ○ ○ ○ ○ ☐

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